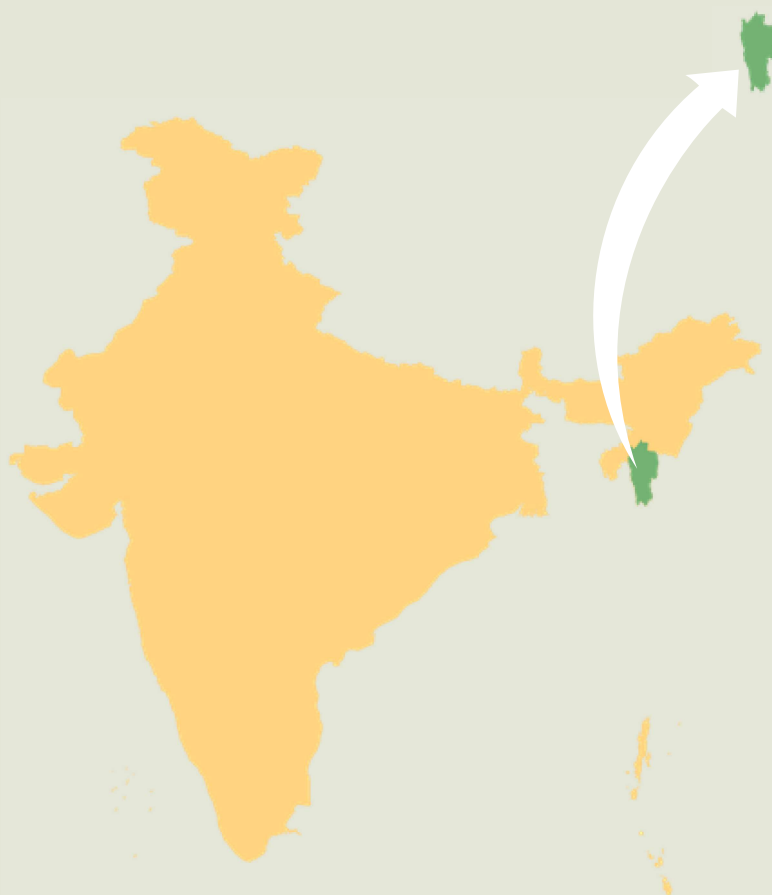


MIZORAM



Geographical Area
21,081km²

Geographical Coordinates
Latitude 21°56' N to 24°31' N
Longitude 92°16' E to 93°26' E

Population (as per Census 2011)
1.09 million
Urban 0.57 million (52.11 %)
Rural 0.52 million (47.89 %)
Tribal 1.03 million (94.43 %)

Average Population Density
52 per km²

Livestock Population
(as per 19th Livestock Census)
0.31 million

No. of Districts
11

No. of Hill Districts
11

No. of Tribal Districts
11

Table 10.18.1 Land Use Pattern

Land Use Types	Area (in '000 ha)	Percentage
Geographical Area	2,108	
Reporting area for land utilization	2,038.99	100.00
Forests	1,585.30	77.75
Not available for land cultivation	75.25	3.69
Permanent pastures and other grazing lands	11.11	0.55
Land under misc. tree crops and groves	41.31	2.03
Culturable wasteland	7.44	0.36
Fallow land other than current fallows	127.32	6.24
Current fallows	46.56	2.28
Net area sown	144.70	7.10

Source: Land Use Statistics, Ministry of Agriculture and Farmer's Welfare, GOI, (2021-22).

10.18.1 Forest Cover

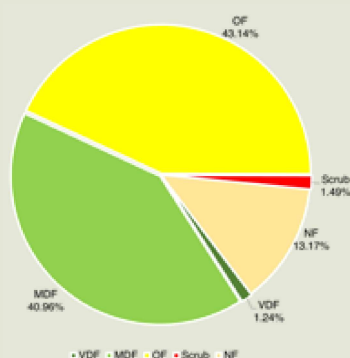


Table 10.18.2 Forest Cover of Mizoram

(km ²)		
Class	Area	% of Calculated Area by Sol
VDF	261.52	1.24
MDF	8,635.76	40.96
OF	9,093.18	43.14
Total	17,990.46	85.34
Scrub	314.54	1.49

Figure 10.18.1 Forest Cover of Mizoram

Table 10.18.3 District- wise Forest Cover in Mizoram

(km ²)								
District	Calculated Area by Sol	2023 Assessment				% of Calculated Area by Sol	Change w.r.t. 2021 Raster based*	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total			
Aizawl ^H	2,213.50	15.09	917.38	967.42	1,899.89	85.83	-33.64	13.89
Champhai ^H	1,652.50	42.95	915.45	415.98	1,374.38	83.17	86.69	68.24
Hnahthial ^H	851.50	0.00	372.14	363.32	735.46	86.37	114.67	12.62
Khawzawl ^H	1,088.25	9.03	489.22	324.92	823.17	75.64	12.89	49.75
Kolasib ^H	1,492.50	1.32	636.15	640.45	1,277.92	85.62	-37.58	2.68
Lawngtlai ^H	2,424.75	78.44	781.73	1,081.75	1,941.92	80.09	50.17	25.51
Lunglei ^H	3,685.25	30.32	1,263.70	1,964.41	3,258.43	88.42	-30.66	27.77
Mamit ^H	3,048.25	50.07	1,176.17	1,495.81	2,722.05	89.30	-21.96	32.11
Saitual ^H	1,651.25	17.10	729.86	612.81	1,359.77	82.35	-17.56	60.92
Serchhip ^H	1,443.75	16.71	589.59	603.07	1,209.37	83.77	14.17	10.18
Siaha ^H	1,529.50	0.49	764.37	623.24	1,388.10	90.76	104.54	10.87
Grand Total	21,081.00	261.52	8,635.76	9,093.18	17,990.46	85.34	241.73	314.54

*Area figure calculated without normalization factor.



Table 10.18.4 Division-wise Forest Cover in Mizoram

(km ²)								
Division	Digitized Division Boundary Area*	2023 Assessment				% of Digitized Division Boundary Area	Change w.r.t. 2021 Raster based*	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total			
Aizawl	1,730.75	21.99	649.23	798.89	1,470.11	84.94	-35.81	19.88
CADC	671.79	0.00	177.88	273.03	450.91	67.12	-16.17	4.44
Champhai	3,238.52	59.07	1,646.13	887.57	2,592.77	80.06	87.46	142.78
Dampa Tiger Reserve	377.17	29.84	129.38	213.13	372.35	98.72	-0.91	0.04
Darlawn	1,527.25	11.48	679.63	633.65	1,324.76	86.74	-30.82	21.42
Kawrthah	816.74	0.00	342.19	322.23	664.42	81.35	-0.69	15.41
Kolasib	1,516.42	1.32	642.97	605.97	1,250.26	82.45	-37.30	2.61
LADC	1,742.20	78.52	596.66	803.28	1,478.46	84.86	67.97	19.95
Lunglei	1,882.48	0.06	717.22	1,002.05	1,719.33	91.33	53.35	11.89
MADC	1,542.89	0.49	769.43	623.50	1,393.42	90.31	102.33	11.96
Mamit	1,785.33	18.00	668.42	928.21	1,614.63	90.44	-19.64	16.16
N.Vanlaiphai	994.69	2.63	460.81	366.20	829.64	83.41	106.89	12.56
Thenzawl	2,187.37	38.09	810.84	1,074.44	1,923.37	87.93	-35.13	20.80
Tlabung	1,084.88	0.00	329.41	545.78	875.19	80.67	-0.20	14.24
Area Which Does not fall in any Division	48.43	0.03	15.56	15.25	30.84	63.68	0.40	0.40
Grand Total	21,146.91	261.52	8,635.76	9,093.18	17,990.46	85.07	241.73	314.54

*As per the division boundary shapefile provided by State Forest Department.

*Area figure calculated without normalization factor.

Table 10.18.5 Forest Cover in Municipal Areas of Mizoram

(km ²)								
Sl. No.	Name of Urban Local Body	Area as per Digitized Boundary*	2023 Assessment				% of Total Forest Cover w.r.t. Area of Digitized Boundary	Scrub
			Very Dense Forest	Mod. Dense Forest	Open Forest	Total Forest Cover		
1	Aizawl	113.71	0.00	41.04	29.22	70.26	61.79	2.18
2	Lunglei	170.28	0.00	70.78	78.39	149.17	87.60	0.47
Grand Total		283.99	0.00	111.82	107.61	219.43	77.27	2.65

*Shapefile of digitized boundary as provided by under Secretary to Govt. of Mizoram; Environment, Forest & Climate Change Department.

10.18.2 Forest Cover Inside and Outside Recorded Forest Area (or Green Wash)

The Forest Cover inside and outside Recorded Forest Area (RFA) has been analysed in different categories and presented in table given below.

Table 10.18.6 Forest Cover Inside and Outside Recorded Forest Area (or Green Wash) in Mizoram

Forest Cover Inside the Recorded Forest Area (or Green Wash)				Forest Cover Outside the Recorded Forest Area (or Green Wash)			
VDF	MDF	OF	Total	VDF	MDF	OF	Total
259.83	8,438.53	8,931.24	17,629.60	1.69	197.23	161.94	360.86
1.47%	47.87%	50.66%		0.47%	54.65%	44.88%	

*In case of Mizoram, Green Wash boundaries have been used.

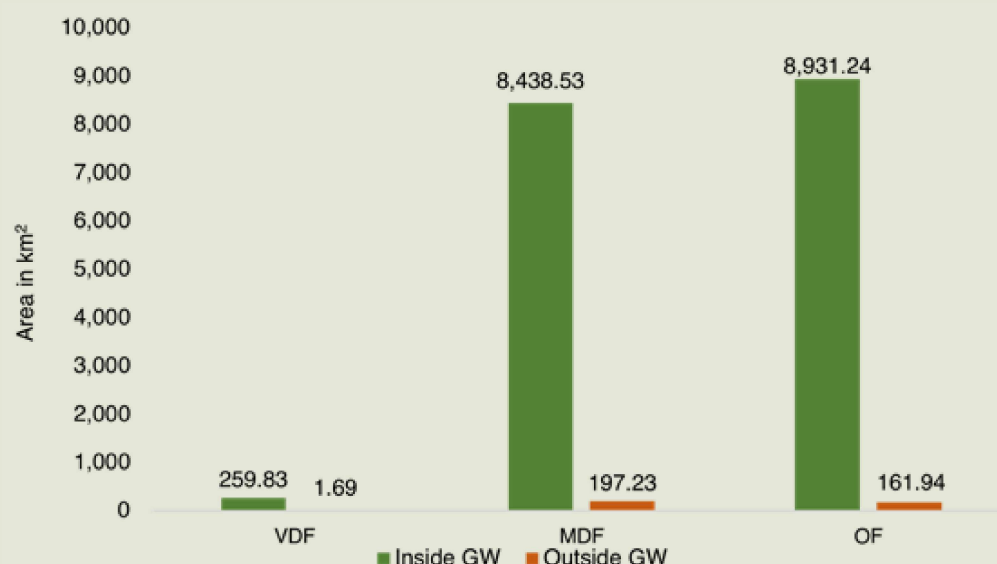


Figure 10.18.2 Forest Cover Inside and Outside of Green Wash in Mizoram

Table 10.18.7 Forest Cover Change Matrix Inside RFA/GW for Mizoram between 2021 Raster based and 2023 Assessments

Class	2023 Assessment inside RFA/GW					Total ISFR 2021 inside RFA / GW Raster based*
	VDF	MDF	OF	Scrub	NF	
VDF	192.71	0.01	0.03	0.00	0.98	193.73
MDF	66.11	8,269.75	5.72	1.06	306.00	8,648.64
OF	0.80	10.59	8,026.29	3.14	553.49	8,594.31
Scrub	0.00	0.00	0.00	1.43	0.00	1.43
NF	0.21	158.18	899.20	295.85	1,778.66	3,132.10
Total ISFR 2023 inside RFA /GW	259.83	8,438.53	8,931.24	301.48	2,639.13	20,570.21
Net Change	66.10	-210.11	336.93	300.05	-492.97	

*Area figure calculated without normalization factor.



Table 10.18.8 Forest Cover Change Matrix Outside RFA/GW for Mizoram between 2021 Raster based and 2023 Assessments

Class	2023 Assessment outside RFA/GW					(km ²)
	VDF	MDF	OF	Scrub	NF	Total ISFR 2021 outside RFA / GW Raster based*
VDF	0.36	0.00	0.00	0.00	0.00	0.36
MDF	1.33	178.27	0.11	0.00	11.18	190.89
OF	0.00	0.20	111.83	0.00	8.77	120.80
Scrub	0.00	0.00	0.00	0.29	0.00	0.29
NF	0.00	18.76	50.00	12.77	116.92	198.45
Total ISFR 2023 outside RFA/GW	1.69	197.23	161.94	13.06	136.87	510.79
Net Change	1.33	6.34	41.14	12.77	-61.58	

*Area figure calculated without normalization factor.

Table 10.18.9 Altitude-wise Forest Cover in Mizoram

Altitude Zone (m)	Calculated Area by Sol	VDF	MDF	OF	Total	Scrub	(km ²)
0-500	9,163.00	87.18	3,125.39	4,676.68	7,889.25	62.19	
500-1000	8,205.00	76.95	3,610.92	3,421.12	7,108.99	145.70	
1000-2000	3,710.00	96.60	1,898.17	994.98	2,989.75	106.65	
2000-3000	3.00	0.79	1.28	0.40	2.47	0.00	
Total	21,081.00	261.52	8,635.76	9,093.18	17,990.46	314.54	

(based on SRTM, Digital Elevation Model, 30 m, 2016).

Table 10.18.10 Forest Cover in Different Slope Classes in Mizoram

Slope (in degrees)	Calculated Area by Sol	VDF	MDF	OF	Total	Scrub	(km ²)
0-5	1,565.00	16.74	488.44	602.07	1,107.25	17.56	
5-10	2,668.00	43.44	947.33	1,161.01	2,151.78	37.97	
10-15	3,625.00	60.25	1,371.99	1,610.57	3,042.81	59.07	
15-20	4,058.00	52.71	1,627.50	1,816.08	3,496.29	66.65	
20-25	3,713.00	38.34	1,574.11	1,651.69	3,264.14	57.73	
25-30	2,745.00	24.68	1,237.70	1,194.65	2,457.03	40.96	
>30	2,707.00	25.36	1,388.69	1,057.11	2,471.16	34.60	
Total	21,081.00	261.52	8,635.76	9,093.18	17,990.46	314.54	

(based on SRTM, Digital Elevation Model, 30 m, 2016).

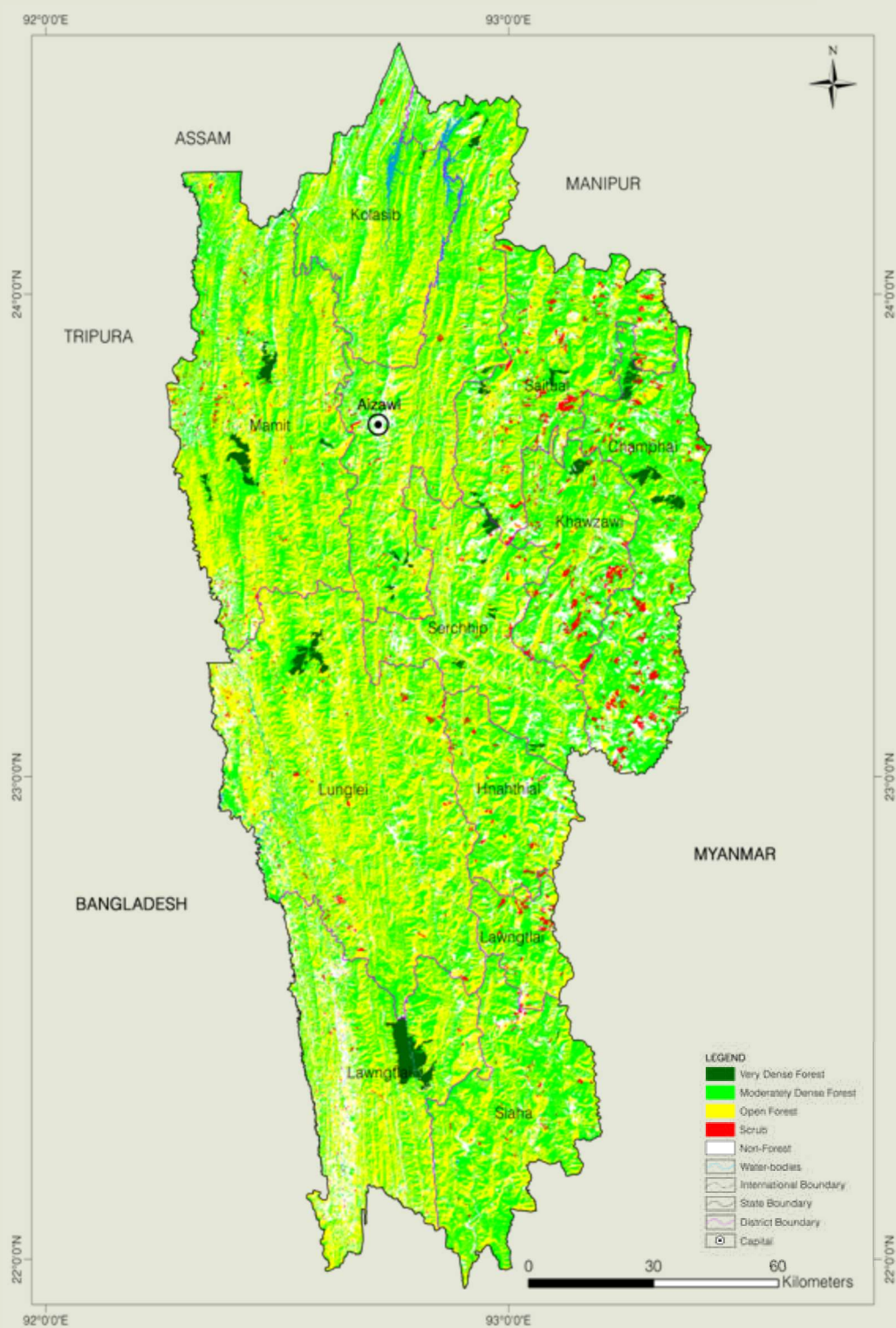


Figure 10.18.3 Forest Cover Map of Mizoram



10.18.3 Forest Types

The area under different Forest Types in Mizoram (as per the Champion & Seth Forest Classification, 1968) based on the Forest Cover Map (FCM), ISFR-2023, is presented in the following table.

Table 10.18.11 Area Statistics of the Forest Types Found in Mizoram

(km ²)			
Sl. No.	Forest Type	Area	% of the total mapped area*
1	2B/C1/2S1 Pioneer Euphorbiaceous scrub	74.28	0.41
2	2B/C2 Cachar semi-evergreen forest	5,572.04	30.44
3	2/2S1 Secondary moist bamboo brakes	6,656.91	36.37
4	3C/C3b East Himalayan moist mixed deciduous forest	5,897.13	32.21
5	8B/C1 East Himalayan subtropical wet hill forest	7.97	0.04
6	9/C2 Assam subtropical pine forest	92.68	0.51
Sub Total		18,301.01	99.98
7	TOF/ Plantation	3.99	0.02
Total (Forest Cover & Scrub)		18,305.00	100.00

*Forest Types have been assigned to the natural forest formations under forest cover and scrub categories shown in the forest cover mapping (ISFR, 2023). The total mapped area, therefore, is sum of forest cover and scrub.

10.18.4 Forest Fire

District-wise number of forest fire detected by FSI using SNPP-VIIRS sensors (This includes large, continuous and repeated forest fires) during the fire season 2022-23 & 2023-24.

Table 10.18.12 District-wise Number of Forest Fire Detected

Sl. No.	District	SNPP-VIIRS Detection during 2022-23	SNPP-VIIRS Detection during 2023-24
1	Aizawl	446	442
2	Champhai	581	140
3	Hnahthial	70	178
4	Khawzawl	127	198
5	Kolasib	245	284
6	Lawngtlai	1,385	1,811
7	Lunglei	1,045	1,558
8	Mamit	814	994
9	Saitual	316	340
10	Serchhip	381	245
11	Siaha	388	437
Total		5,798	6,627

10.18.5 Fire Prone Forest Areas

Forest Cover under different classes of forest fire proneness is given in following table.

Table 10.18.13 Forest Fire Prone Classes

(km ²)			
Sl. No.	Forest Fire Prone Classes	Forest Cover*	% of Total Forest Cover
1	Extremely fire prone	473.93	2.59
2	Very highly fire prone	2,596.79	14.19
3	Highly fire prone	6,252.11	34.15
4	Moderately fire prone	5,164.07	28.21
5	Less fire prone	3,818.10	20.86
Total		18,305.00	100.00

*Forest Cover including Scrub.

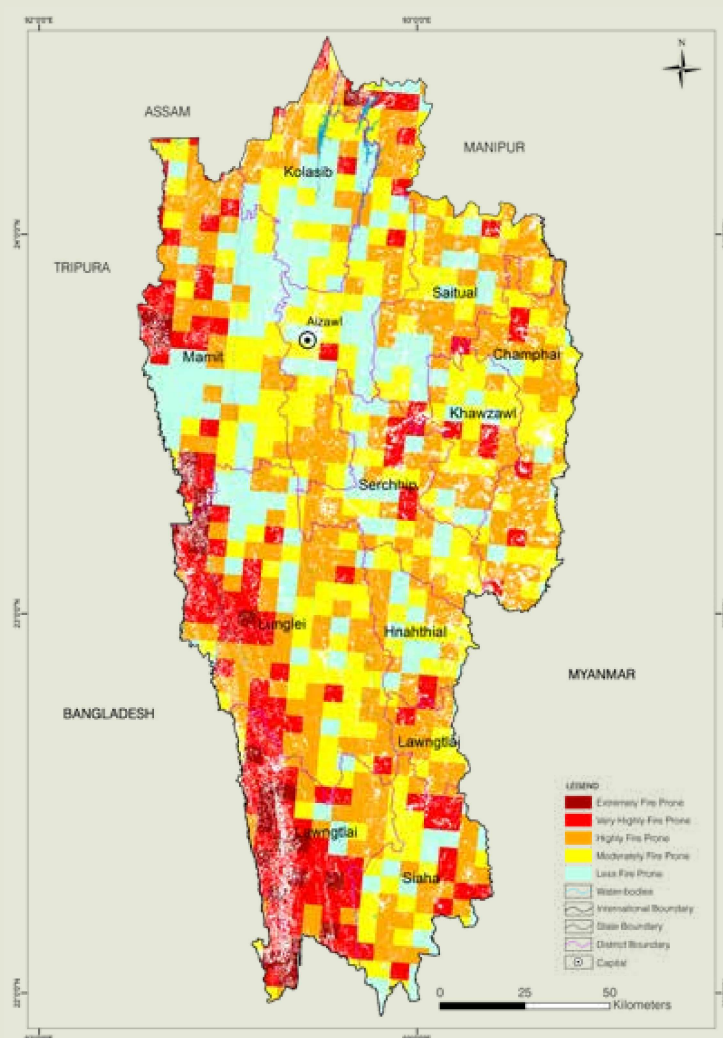


Figure 10.18.4 Fire Prone Forest Areas under Different Fire Prone Classes



10.18.6 Results Derived from NFI for Mizoram

Table 10.18.14 Number of Trees and their Volume for Top 5 Species in RFA

Sl. No.	Species	No. of Trees (in '000)	Volume (M m ³)
1	<i>Schima wallichii</i>	16,007	3.31
2	<i>Quercus species</i>	15,153	2.38
3	<i>Macaranga species</i>	13,411	2.32
4	<i>Tectona grandis</i>	11,494	3.63
5	<i>Albizia species</i>	5,467	1.15

Table 10.18.15 Number of Trees and their Volume for Top 5 Species in Rural Area

Sl. No.	Species	No. of Trees (in '000)	Volume (M m ³)
1	<i>Schima wallichii</i>	27,708	6.989
2	<i>Macaranga species</i>	19,569	2.186
3	<i>Castanopsis species</i>	15,102	2.425
4	<i>Areca catechu</i>	11,989	0.250
5	<i>Quercus species</i>	11,564	3.358

Table 10.18.16 Number of Trees and their Volume for Top 5 Species in Urban Area

Sl. No.	Species	No. of Trees (in '000)	Volume (M m ³)
1	<i>Areca catechu</i>	1,207	0.024
2	<i>Mangifera indica</i>	950	0.129
3	<i>Schima wallichii</i>	531	0.100
4	<i>Artocarpus heterophyllus</i>	375	0.076
5	<i>Parkia javanica/ Gleditsia javanica</i>	268	0.031

Table 10.18.17 Major NTFP Species in Mizoram

Sl. No.	Species	Habit	No. of Plants (in '000)
1	<i>Emblica officinalis/ Phyllanthus emblica</i>	Tree	38,849
2	<i>Saraca asoca</i>	Tree	11,179
3	<i>Aquilaria malaccensis/Aquilaria agallocha</i>	Tree	7,710
4	<i>Alstonia scholaris</i>	Tree	6,362
5	<i>Costus speciosus</i>	Shrubs	11,11,616
6	<i>Hedyotis scandens/ Dimetia scandens</i>	Shrubs	7,41,077
7	<i>Calamus spp.</i>	Climbers	4,80,328
8	<i>Embelia ribes</i>	Climbers	1,37,237
9	<i>Thysanolaena latifolia/ Thysanolaena maxima</i>	Herbs	5,16,36,741
10	<i>Curcuma caesia</i>	Herbs	32,59,838

Table 10.18.18 Major Invasive Species in the State Inside the RFA in Mizoram

Sl. No.	Species	Estimated Extent (km ²)
1	<i>Chromolaena odorata</i>	128.40
2	<i>Saccharum spontaneum</i>	50.44
3	<i>Mikania micrantha</i>	21.78
4	<i>Ipomoea carnea</i>	17.20
5	<i>Ageratina adenophora</i>	12.61



Photo: FSI Repository

Forest Survey of India